



Crowdsourcing Tribal Walkability Data with the *Our Voice* Method



Image Source: The Bold Opinion, 1/31/2017

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Confederated Salish & Kootenai Tribes
of the Flathead Reservation



Tribal Territories in Montana

Boundaries as defined by the Fort Laramie Treaty of 1851, and the Flathead and Blackfeet Treaties of 1855.*

Reservations today shown in red. ★ Star indicates location of tribal capital.

Names Tribes Call Themselves: A Key

Salish / Sélish	Blackfeet / Niitsitapi (Pikuni)	Gros Ventre / A'aninin	Northern Cheyenne / Tsetsêhesêstâhase and So'taa'eo'o
Pend d'Oreille / Qlispé	Chippewa (Ojibwe) / Annishinabe	Assiniboine / Nakoda, Nakona	Crow / Apsáalooke
Kootenai / Ksanka	Plains Cree / Ne-i-yah-wahk	Sioux / Lakota, Dakota	Little Shell Chippewa / Annishinabe and Métis

Reservation Lands in Montana, and American Indian Tribes based on those lands

Blackfeet Reservation: Blackfeet	Crow Reservation: Crow	Flathead Reservation: Salish, Pend d'Oreille, Kootenai
Fort Belknap Reservation: Gros Ventre and Assiniboine	Fort Peck Reservation: Assiniboine and Sioux	Northern Cheyenne Reservation: Northern Cheyenne
Rocky Boy's Reservation: Chippewa Cree	Landless, but headquartered in Cascade County: Little Shell Band of Chippewa	

* Boundaries shown on this map reflect the demarcation of territories by non-Indian officials at treaty time, and do not necessarily accurately represent tribal territories occupied in the 1850s.

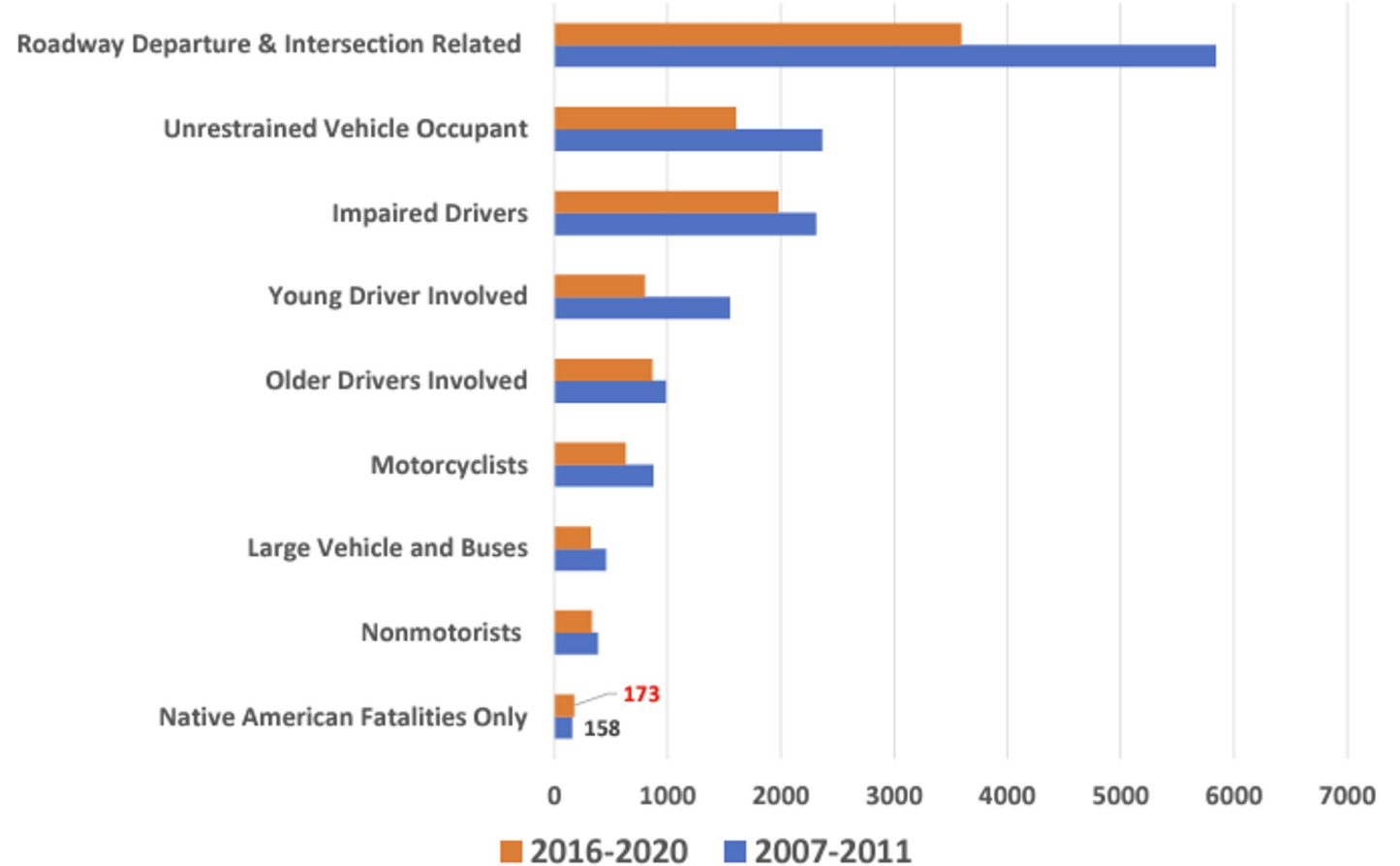
Source:
<https://www.montana.edu/iefa/introductiontomtribalnations/tribalterritories.html>



zero deaths - zero serious injuries

2020 Montana Crash Data (2011-2020)

Fatal & Serious Injuries Associated Key Emphasis Areas, First 5-Years vs Recent 5-Years of Implementation



Data confirmed 8/30/2022

The Growing Older Staying Strong Initiative:

A community-based participatory research partnership between the University of Montana and the Confederated Salish and Kootenai Tribes Tribal Health Department to promote physical activity security among Native American older adults living on the Flathead Reservation (MT)



Graphic developed by Dr. Samantha Morigeau

Physical Activity Security:

When all people...have physical and economic access to **sufficient**, **safe** and **enjoyable** physical activity to meet, not only their health needs, but to promote physical and emotional well-being and social connectedness, for an active and healthy life.

Lambert et al., 2020. *British Journal of Sports Medicine*

Community-based participatory research (CBPR):

A collection of principles to center the voices of community members for community-driven, action-focused research



Factors that impact walking among Native American older adults living on the Flathead Reservation



Table 3. List of barriers and facilitators for physical activity	
BARRIERS	FACILITATORS
Individual Level Factors	
<ul style="list-style-type: none"> • Physical health • Mental health • Unmotivated • Too Busy 	<ul style="list-style-type: none"> • Active in the past, still active now • Enjoyment • Physical health • Mental health • Personal connection to land, ancestors*
Social Level Factors	
<ul style="list-style-type: none"> • No walking partner(s) • Physical inactivity is a social norm • Family/community responsibilities • Decreased support for elders in the community* 	<ul style="list-style-type: none"> • Stay active to contribute to family and community* • Observed others become ill, want to avoid it • Community traditions linked to PA* • Social connectedness • Social event or group goal to work towards • Multigenerational PA*
Environment Level Factors	
<ul style="list-style-type: none"> • Cold/winter • Lack of acceptable walking areas • Safety • Lack of ongoing programming for older adults • Investment by leadership in development in recreation opportunities* • Historical changes/policies* 	<ul style="list-style-type: none"> • Seasonal activities to connect with the outdoors/earth* • Existing paths, trails in communities • Tribal policies and community programming
* Indicates themes identified as specific to sample population	

Current project objectives:

We will use the ***Our Voice*** method to

(1) Crowdsourcing information on pedestrian safety & walkability from the perspectives of Native American older adults living on the Flathead Reservation, *and*

(2) Develop community-driven solutions to improve pedestrian safety for CSKT older adults and community members



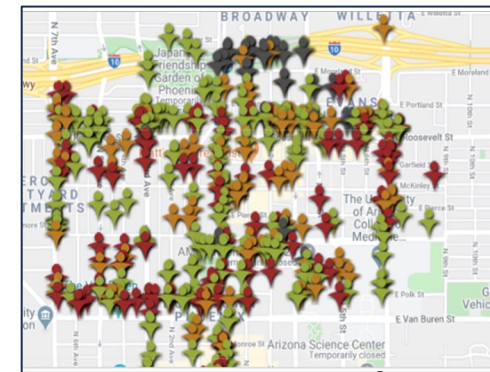
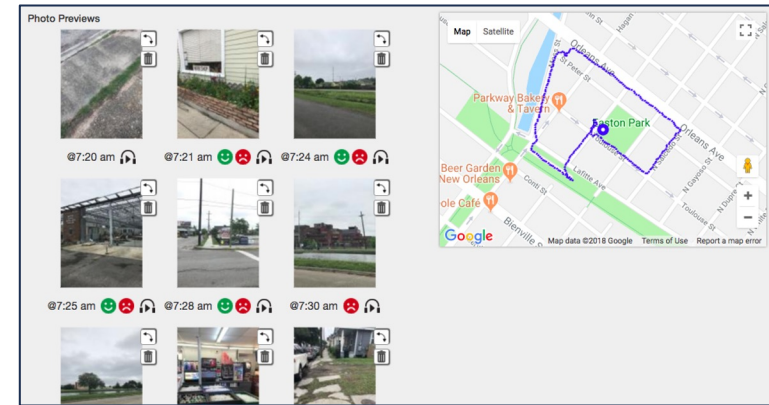
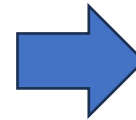


Stanford
MEDICINE



Faculty Director:
Dr. Abby King

The *Our Voice* method: Citizen Science for Health Equity



A mobile health tool and community-engaged process for data-driven action

The *Our Voice* method four-step process:



**STEP 1:
DISCOVER**



**STEP 2:
DISCUSS**

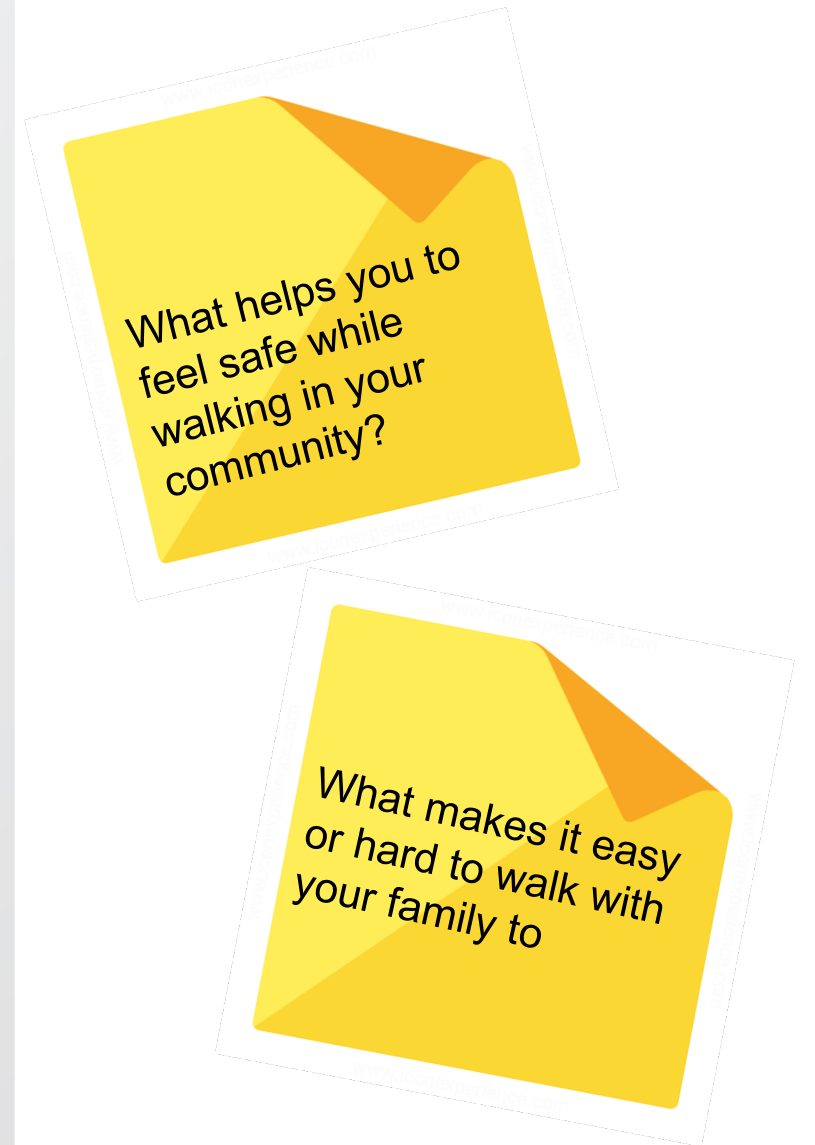
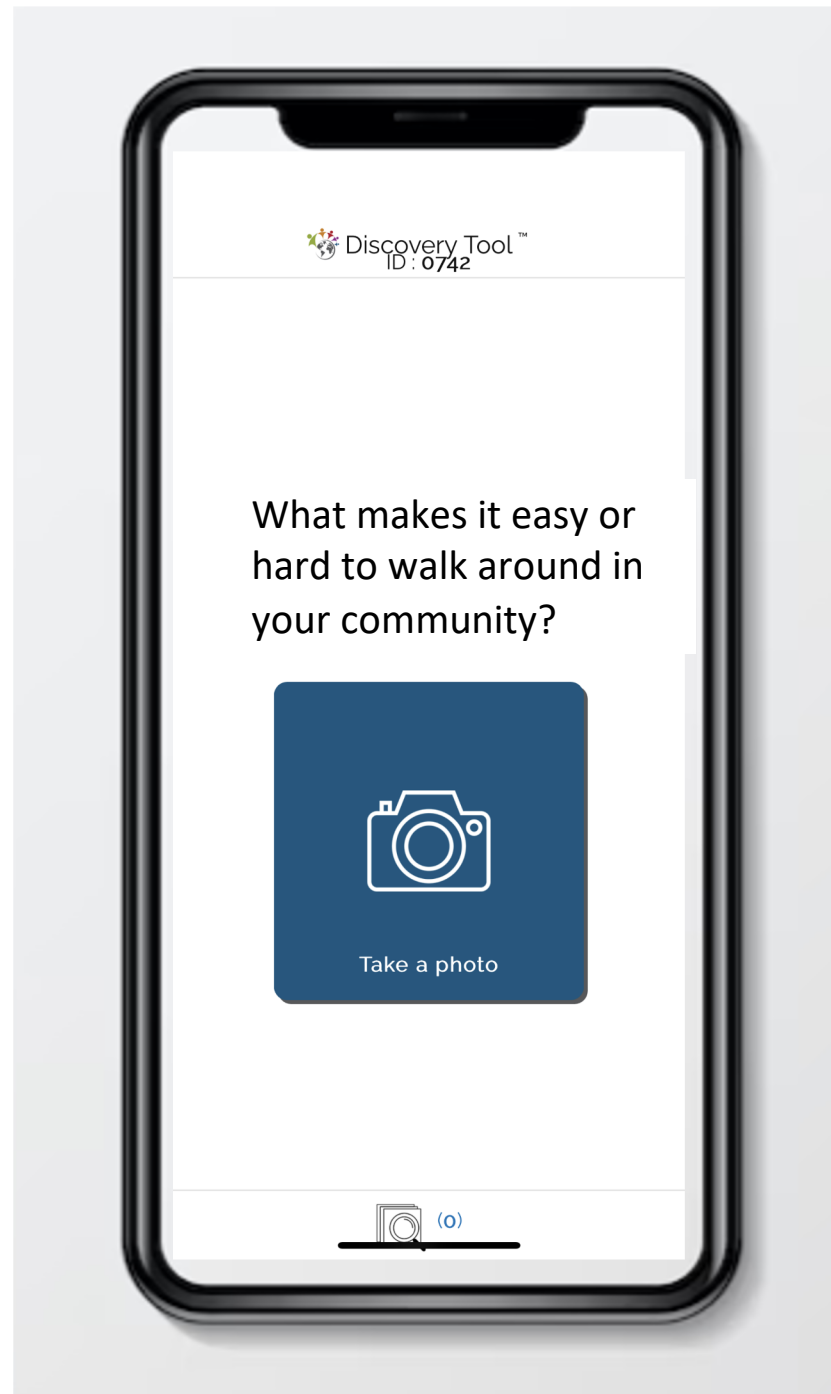


**STEP 3:
ACTIVATE**



**STEP 4+:
CHANGE**

Discovery Tool guiding question - *will be developed using a community-based process*



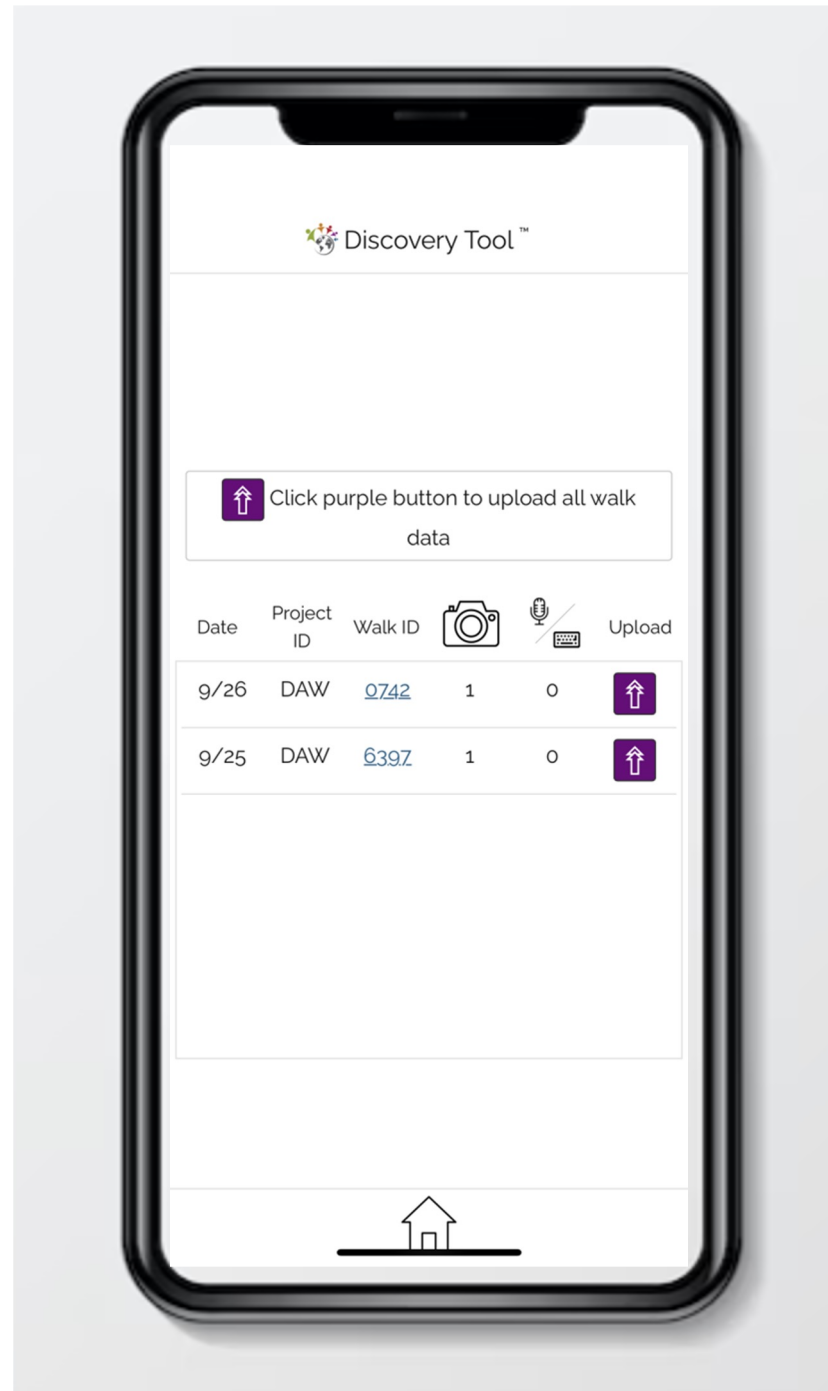


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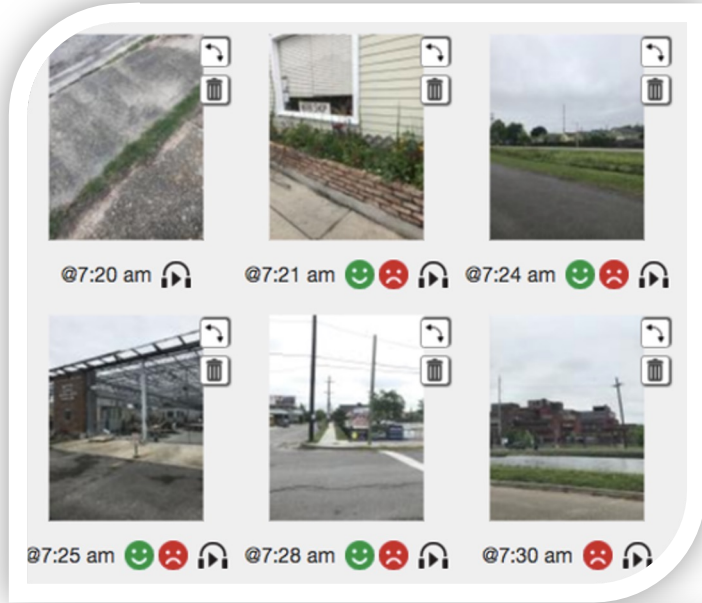


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service
needed only
for data
upload





The *Our Voice* Method: Citizen science for health equity



The Output

- **Crowdsourced** multi-method data
 - Geotagged photos
 - Narratives
 - Rankings
 - Tags
- **Community-prioritized** issues/solutions
- **Community engagement** for collective action toward improvement



Community Research Partner Acknowledgements:

- **Confederated Salish and Kootenai Tribes**

- Tribal Health Department

- Samantha Morigeau, DPT

- Chelsea Kleinmeyer, RN, MSN

- Jason Krumbek, DPT

- Amber Landowski, BS

- Paul Phillips

- Lynn Henricksen

- Research Review Board

- Mattea Grant, MPH



- **Salish Kootenai College Institutional Review Board**

- **Growing Older Staying Strong Community Advisory Board**

- **Tribal Community Research Liaison: Niki Graham, MPH**



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More information:

Our Voice at Stanford University

<https://med.stanford.edu/ourvoice.html>

Growing Older Staying Strong at CSKT Tribal Health

<https://www.cskthealth.org/programs/growing-older-staying-strong/>